High Definition
Digital Video Camera
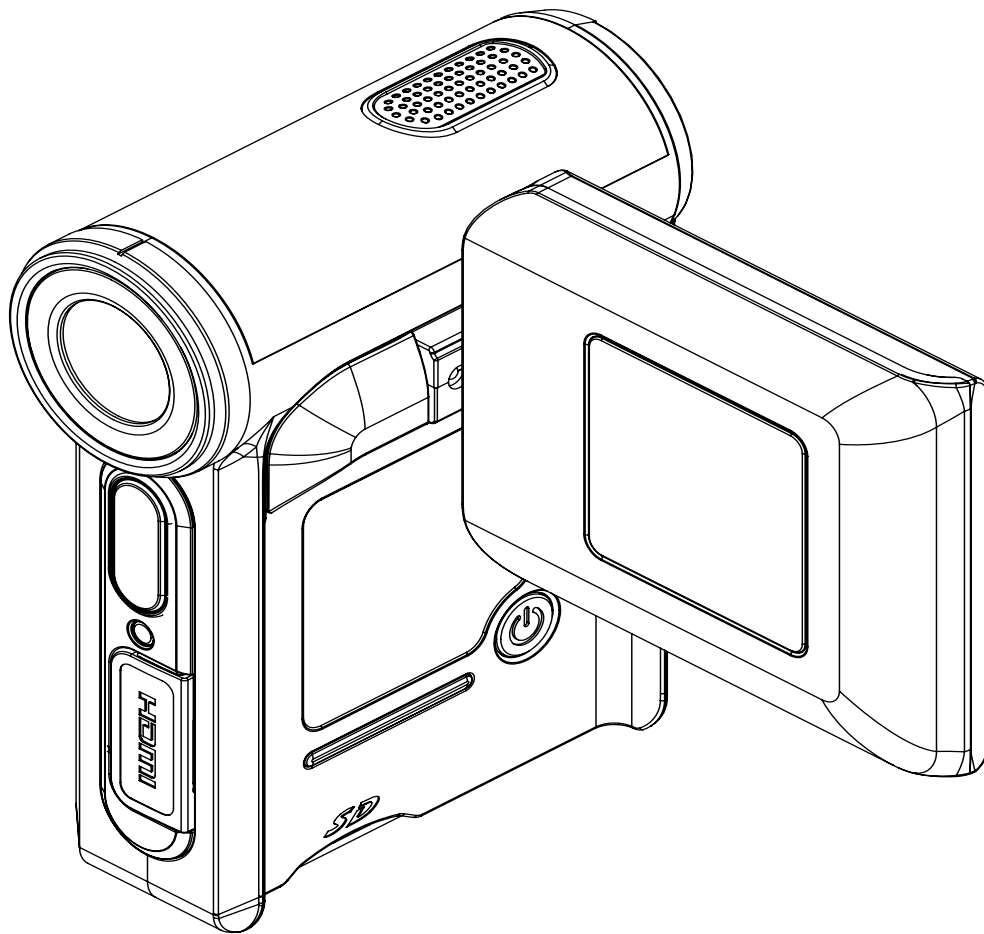
User Manual

Contents

Section 1
Getting to Know Your Camera

Overview

This Video Camera features High Definition (HD) movie recording of astonishing clarity in 1280 X 720 resolution, with high quality audio.

Recorded video clips can be played back on the huge, built-in 2.4" bright color swivel screen or directly on a HD TV using special HDMI cable for ultra fast transfer of HD image and audio data. HDMI cable is provided.

The Camera uses a 5 Mega pixel image sensor, which also takes still images enhanced up to 11 Mega pixels. Exposure and color balance can be set manually if required, or for convenience, use the optimally pre-adjusted auto settings.

This video camera can be used as Mass Storage Media device for easy data storage and transfer, or as a PC / web camera. The camera is easy to use and almost all operational buttons are intuitive.

Additional options include extended memory capability with an SD card, MP3 music player, and a movie player. This camera will become your universal personal player while you are on the move!

With so many options, take a little time, get relaxed and read the complete manual to learn more and fully enjoy all the benefits of your new video camera.
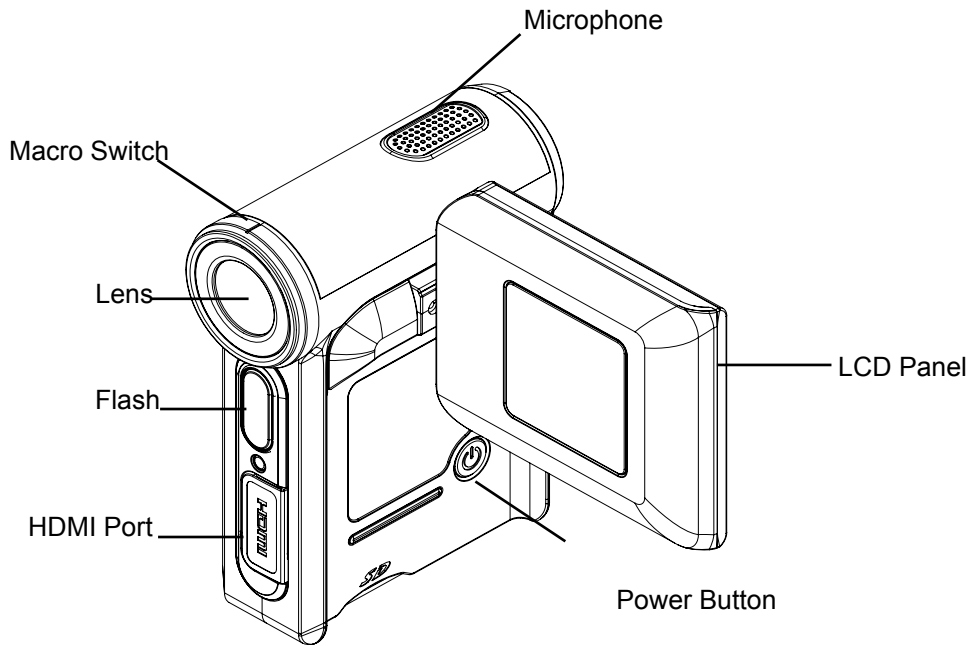
Note
Partial memory of the built-in memory is used for Firmware code.
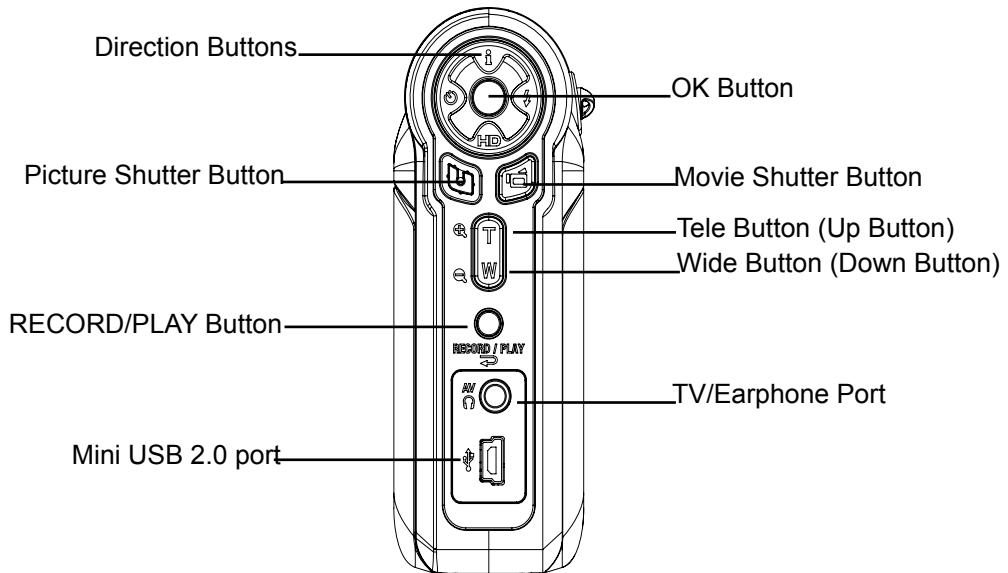
Standard Accessories

Unpack the package and make sure all standard accessories listed are included:
* Camera
* USB Cable
* AV Cable
* HDMI Cable
* Adaptor
* Lithium-ion Rechargeable Battery
* Quick Guide
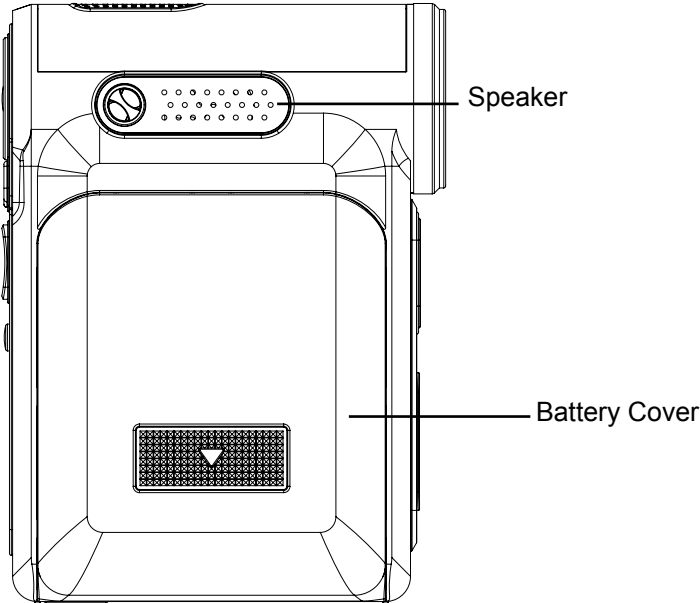* CD-ROM (Driver, Arcsoft Software and User Manual)
* Earphone
* Strap
* Pouch

Front View

Microphone

Macro Switch

Lens

Flash

HDMI Port

LCD Panel

Power Button

Rear View

Direction Buttons

OK Button

Picture Shutter Button

Movie Shutter Button

Tele Button (Up Button)

Wide Button (Down Button)

RECORD/PLAY Button

RECORD / PLAY
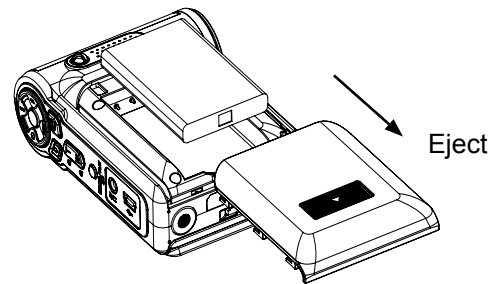
TV/Earphone Port

Mini USB 2.0 port

Side View

Speaker

Battery Cover

Loading the Battery

Before using the camera, users must load NP 60 Battery.

1. Follow the arrow direction and slide to eject the battery cover.
2. Insert the battery according to the correct polarity marks (+ or -).
3. Close the battery cover firmly.

Eject

Inserting and Removing an SD Card (Optional)

The camera comes with internal memory which allows you to store pictures, movies, voice recordings and music. You can expand the memory capacity by using an optional SD or MMC memory card. To insert a memory card, refer to the figure as below:

1. Insert the memory card into the right position.
2. To remove an installed SD card, press the card inwards to release it.
3. When the card pops out, gently remove it from its slot.
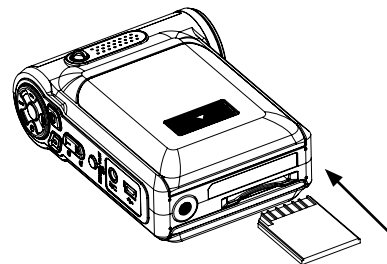
Note

When a memory card is fitted, movies and pictures are saved on card rather than on the built-in memory.

## Protecting Data on an SD Card

SD card is read-only by locking the SD card. No pictures, movies and voice can be recorded when the SD card is locked. Make sure the lock is on writeable position before recording any media.

Writeable position   Write-Protected Position
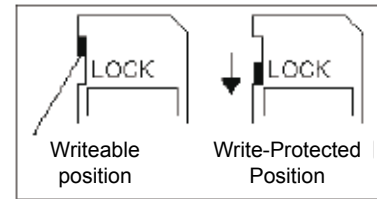
Turning the Camera On and Getting Started

To turn on the camera:

1. Flip out the LCD panel; the camera will turn on automatically.

2. Or press Power Button for one second to turn on it.
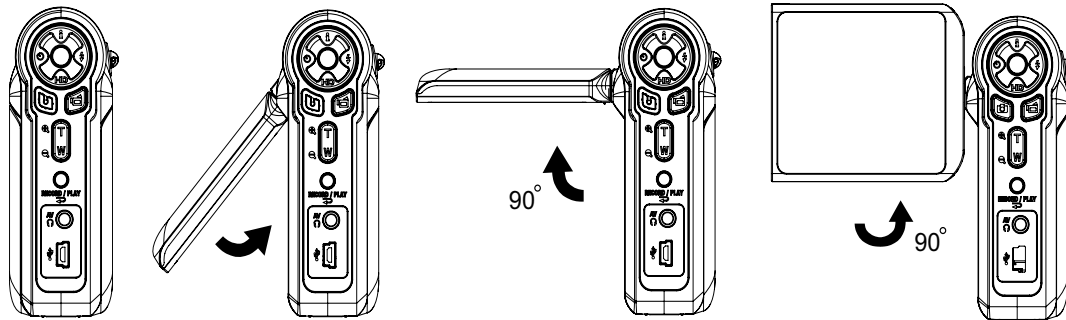
- To take a movie, press the Movie Shutter Button (   ).
- To take a picture, press the Picture Shutter Button (   ).
- To record the voice, press OK Button to enter Record Menu. Use Direction Buttons to choose Voice Pen Option. Press Movie Shutter Button (   ) to start voice recording.
- To take movie at HD resolution, press Down Button to switch to HD mode, then press the Movie Shutter Button (   ).
- To view stored movies, pictures, listen to stored MP3 and voice recordings, press RECORD/PLAY Button (   ) once to switch to Playback Mode. Press a second time to return to Record Mode.

Turning the Camera Off

To turn off the camera, you can either press the Power Button for one second, or you can place the LCD panel back to its original position.

Selecting Interface Language

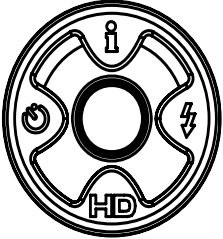The Setting submenu contains options for configuring your camera set up.
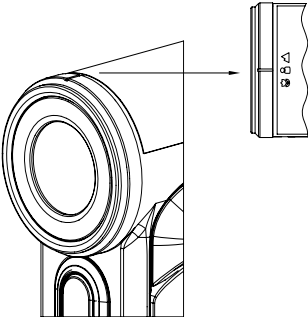
To change advanced setting:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.

2. Use Right/Left Buttons to move to Setting option, then Setting Submenu will pop out on the screen.

3. Use Up/Down Buttons to select Langauge option and press OK button to switch to Language Option.

4. Select language for your country and press OK button to validate the setting.

Submenu	Display Screen
Language	

Section 3
Record Mode

Button Function

	Right Button: Flash Auto/ Off **Left Button:** Self-Timer On/Off **Up Button:** LCD Information On/Off **Down Button:** HD Mode On/Off **OK Button:** Menu ON
	Tele Button: Digital Zoom In **Wide Button:** Digital Zoom out
	Power Button: Press down for one second to turn on or turn off the camera.
	RECORD/PLAY Button functions: 1. Switch between Record /Playback Mode. 2. Return to the previous page.
	Movie Shutter Button: 1. Start to take movie, or record voice. 2. To stop recording, press it again.
	Picture Shutter Button: Start to take picture.
	Macro switch: Switch between Macro Mode, Portrait Mode, and Normal Mode.

LCD Monitor Information

The indicators shown below may display on LCD when movies and pictures are recorded:
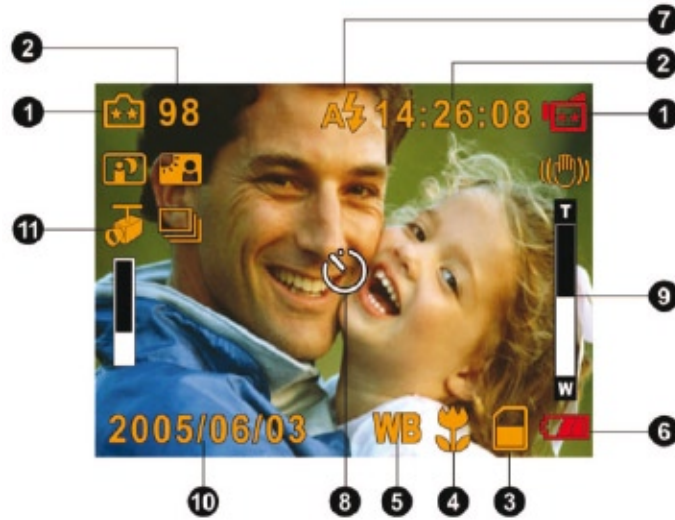
	Record Mode	
	▣	Movie Record Mode
	◘	Picture Record Mode
	♪	Voice Record Mode
	(((▥)))	Motion Stabilization
	▦	Two in One Mode
	▣	Photo Frame
	▤	Multi-Snap Mode
	▣	Night Mode
	▨	Backlight Mode
(1)	**Resolution**	
	Movie: ▣ HD / ▣ D1 / ▣ VGA / ▣ QVGA	
	Picture: ▣ High / ▣ Standard/ ▣ Low	
(2)	Number of images or recording time of movie that can still be taken at current resolution.	
(3)	▤	SD card inserted
(4)	♣	Macro Position Focusing
(5)	**WB**	White Balance
(6)	Battery indicator: ▬ full power / ▬ medium power / ▭ low power / ▭ power empty	

(7)	A⚡	Auto Flash
	🚫	Flash Off
(8)	↻	Self-timer enabled
(9)	8X digital zoom	
(10)	Date/Time: YYYY/MM/DD HH: MM	
(11)	📹	Motion Detection

H.264 Movie Recording

Press Movie Shutter button (📹) to start recording. When a movie is recording, a time indicator will display on LCD monitor. To stop recording, press Movie Shutter Button (📹) again. Press RECORD/ PLAY Button to view the recorded movie.

Four resolution settings are available:

Quality
HD 📹
D1 📹
VGA 📹
QVGA 📹

Picture Recording

Press the Picture Shutter Button (📷) to take a picture.

Press RECORD/PLAY Button to view the picture.

Three resolution settings are available:

Image Quality
High Quality 📷
Standard Quality 📷
Low Quality 📷

Voice Recording

1. Press OK Button to Enter Record Menu while in Record Mode. Use Right/Left Buttons to choose Voice Pen Option.

2. Press Up/Down Buttons to choose "Enter" Option and press OK button to enter Voice Record Mode.

3. Press Movie Shutter Button ( ) to record voice.

4. Press Movie Shutter Button ( ) again to stop.

5. Press RECORD/PLAY Button ( ) to view the recorded voice.

Taking Close up Pictures

The camera has two close-up picture modes to allow you to take pictures at close range. The Macro Mode ( ) should be used for object located at about 20 cm, while the Portrait Mode ( ) should be used for object located from 90 cm to 200 cm.

To take close-up pictures:

1. Slide the macro switch to Macro ( ) or Portrait ( ) positions. In Macro Mode, the macro icon ( ) will appear on the LCD monitor.

2. Press Picture Shutter Button ( ) to take the picture.

Note

Remember to turn the macro switch back to Normal ( ) when you are not taking close-up pictures.

Using Digital Zoom

The digital zoom magnifies images, when recording movies or taking pictures.

1. To zoom in/out, press the Tele/Wide Button.

2. The digital zoom can be set from 1x to 8x.

Options for Record Menu

Movie Mode	Camera Mode	Voice Pen	Effect	Setting
• Resolution • Exposure • Light • Sharpness • White Balance • Stabilization • Motion Detect • Night Mode • Exit	• Resolution • Exposure • Two in One • Photo Frame • Flash • Self-timer • Sharpness • White Balance • Multi-snap • Backlight • Date printing • Night Mode • Exit	• Enter • Exit	• Normal • B/W • Classic • Negative • Exit	• Sound • Time Setting • Format Memory • TV System • Language • Default Setting • Exit

Operations for Record Mode

Operation	Screen
1. Press OK Button when in Movie/Picture Record Mode.	
2. Use Right/Left Buttons to move between main menu options, which are Movie Mode, Camera Mode, Voice Pen, Effect, and Setting. Submenu will pop out while moving to each main option. 3. Press OK Button to validate sub option you select. 4. Select Exit option to exit submenu.	Enter Button

Default Setting and Validation

The following table indicates the camera's default setting as well as its validation.

1. **Always:** The setting always keeps valid.

2. **One Time:** The setting is only valid either once or till camera power off.

	Validation	Default Factory Setting
Resolution	Always	VGA for Movie Standard for Picture
Exposure	One Time	0EV
Sharpness	One Time	Level 8
White Balance	One Time	Auto
Motion Stabilization	Always	Off
Motion Detect	One Time	Off
Two in One	One Time	Off
Photo Frame	One Time	Off
Flash	Always	Off
Self-Timer	One Time	Off
Multi-Snap	One Time	Off
Backlight Mode	One Time	Off
Date Printing	Always	Off
Night Mode	One Time	Off
Effect	One Time	Normal
Sound	Always	On
Format Card	One Time	Off
TV System	Always	Depends on shipping area
Language	Always	Depends on shipping area
Volume	Always	Level 6

Movie Mode submenu Setting

Record main menu includes camera setting and other advanced setting. You can use Right/Left Buttons to move between options and press OK Button to validate the setting.

Movie Resolution

To change Movie Resolution:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.

2. Use Right/Left Buttons to select Movie Mode. Submenu of Movie Mode will pop out on the screen.

3. Use Up/Down Buttons to select Resolution then press OK Button to switch to Resolution submenu.

4. Use Up/Down Buttons to move between four settings.

5. Press OK Button to validate the setting and exit.
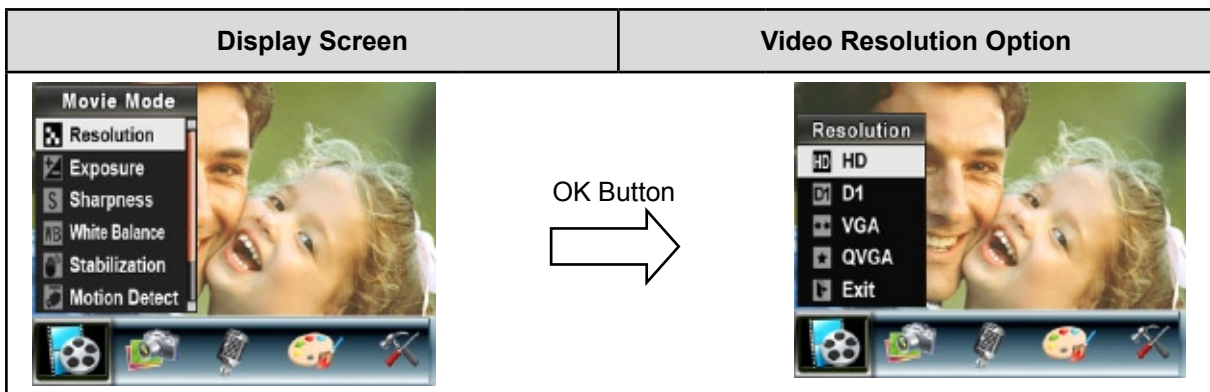
Display Screen	Video Resolution Option
OK Button	

Exposure

The camera adjusts image exposure automatically. In certain circumstances you may wish to adjust the exposure compensation setting.

To change Exposure setting:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.
2. Use Right/Left Buttons to select Movie Mode. Submenu of Movie Mode will pop out on the screen.
3. Use Up/Down Buttons to move to Exposure Option. Press OK Button and then Exposure Submenu will pop out on the screen.
4. Use Up/Down Buttons to choose preferred EV value. The change can be previewed immediately.
5. Press OK Button to validate the setting and exit.

Display Screen	Exposure Option
OK Button ⇨	
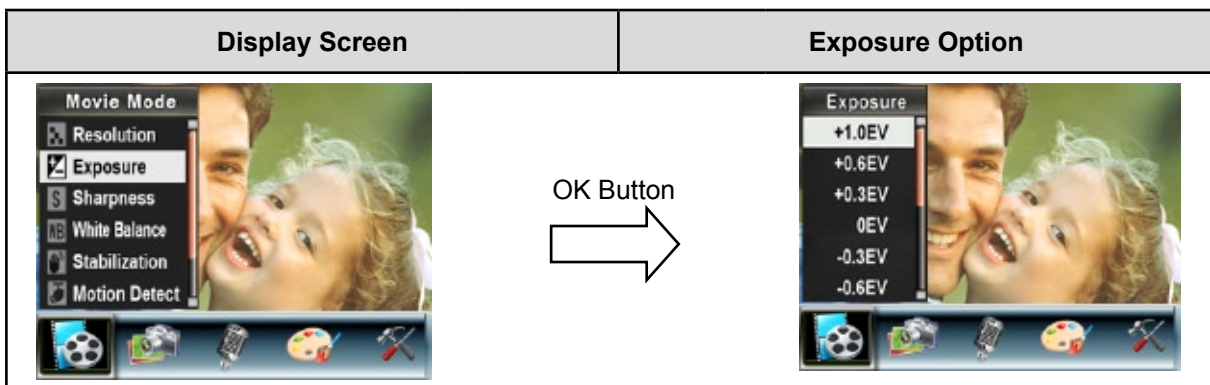
Sharpness

You can soften and sharpen images to achieve different effects.

To change Sharpness setting:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.

2. Use Right/Left Buttons to select Movie Mode. Submenu of Movie Mode will pop out on the screen.

3. Use Up/Down Buttons to select Sharpness then press OK Button to switch to Sharpness submenu.

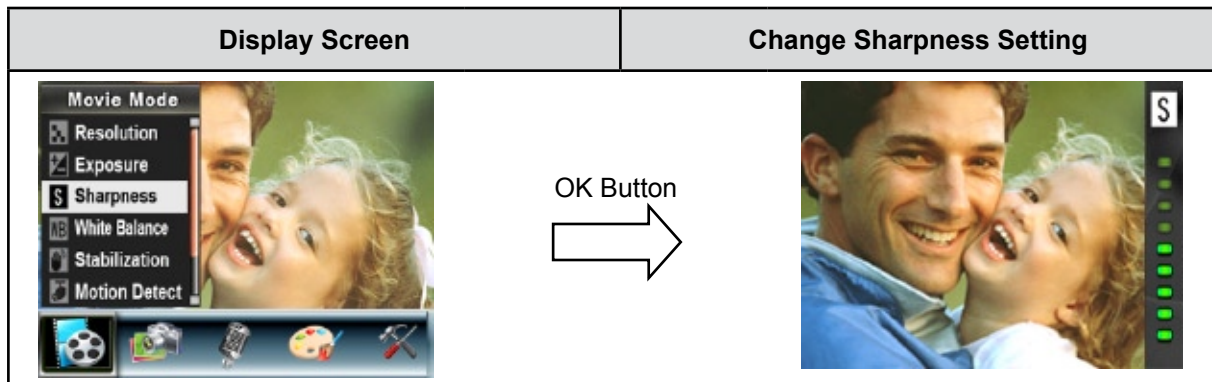4. Use Up/Down Buttons to move between nine levels. The change can be previewed immediately.

5. Press OK Button to validate the setting and exit.

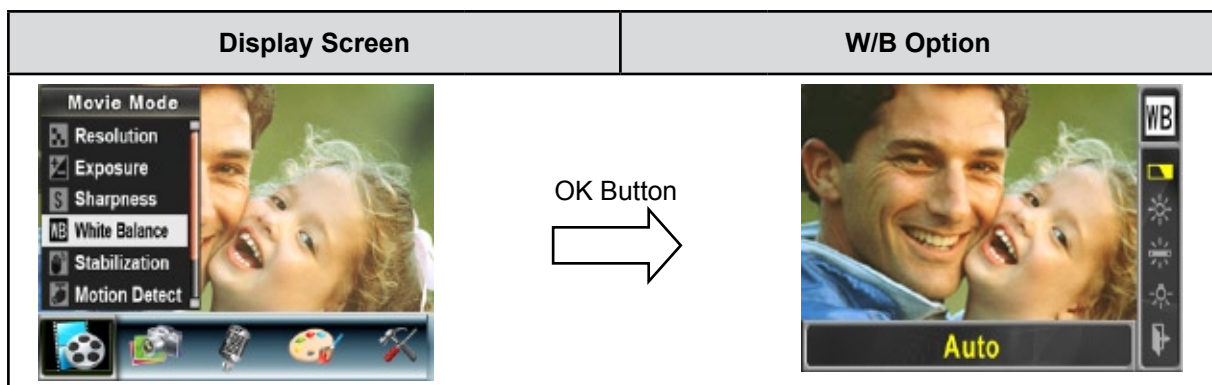| Display Screen	Change Sharpness Setting
	OK Button

White Balance

The camera adjusts the color balance of images automatically. Three manual white balance settings are available:

- **Auto (Default):** The camera automatically adjusts white balance.
- **Daylight:** Outdoors
- **Fluorescent:** Under fluorescent light condition.
- **Tungsten:** Under tungsten light condition.

To change White Balance Setting:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.
2. Use Right/Left Buttons to select Movie Mode. Submenu of Movie Mode will pop out on the screen.
3. Use Up/Down Buttons to select White Balance, then press OK Button to switch to White Balance submenu.
4. Use Up/Down Buttons to move between four settings. The change can be previewed immediately.
5. Press OK Button to validate the setting and exit.

Display Screen	W/B Option
	OK Button

Motion Stabilization

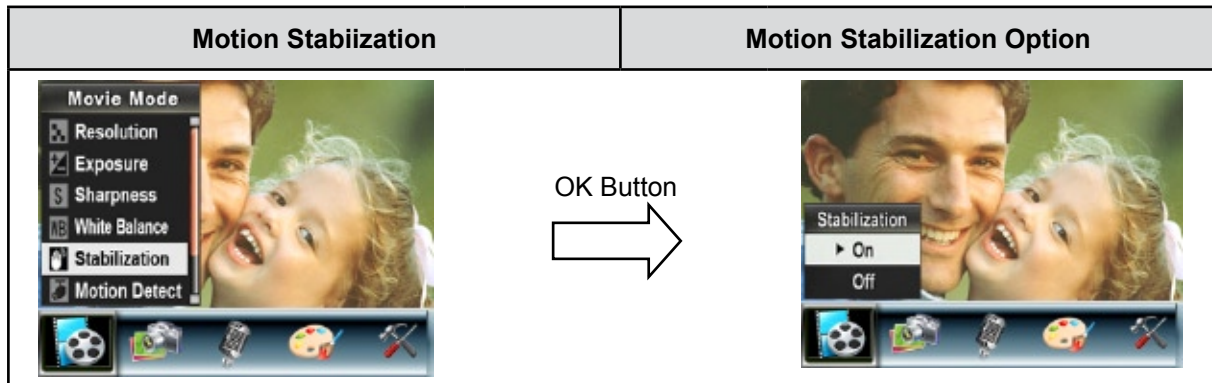To enable Motion Stabilization:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.

2. Use Right/Left Buttons to select Movie Mode. Submenu of Movie Mode will pop out on the screen.

3. Use Up/Down Buttons to select Motion Stabilization then press OK Button to switch to Motion Stabilization submenu.

4. Use Up/Down Buttons to choose ON or OFF.

5. Press OK Button to validate the setting and exit.

Motion Stabization	Motion Stabilization Option
	OK Button

Note

- The captured screen will be smaller when motion stabilization is enabled.

- Digital Zoom is disabled when motion stabilization is activated.
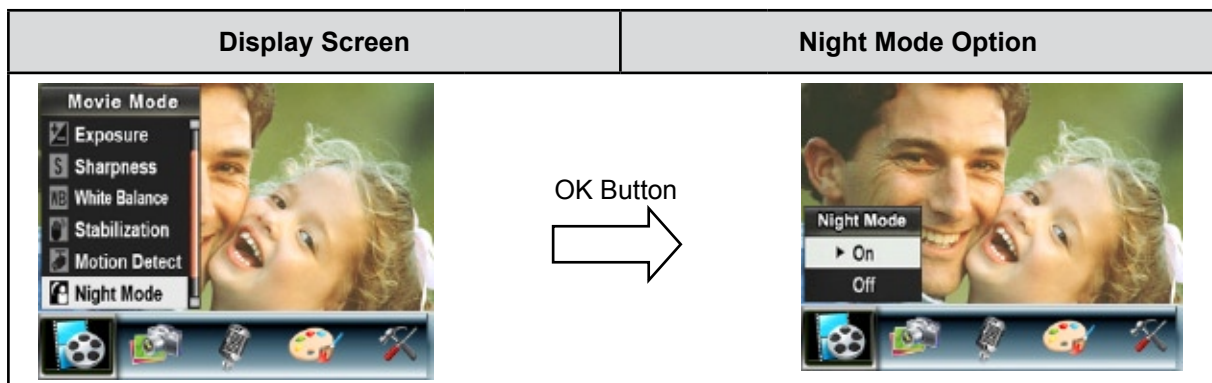
Motion Detection

To enable Motion Detection:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.

2. Use Right/Left Buttons to select Movie Mode. Submenu of Movie Mode will pop out on the screen.

3. Use Up/Down Buttons to select Motion Detect then press OK Button to switch to Motion Detect submenu.

4. Use Up/Down Buttons to choose ON or OFF.

5. Press OK Button to validate the setting and exit.

6. Camera will start to record video once if there is a movement for 3 consecutive seconds. Stop recording if there is no movement for 3 seconds.
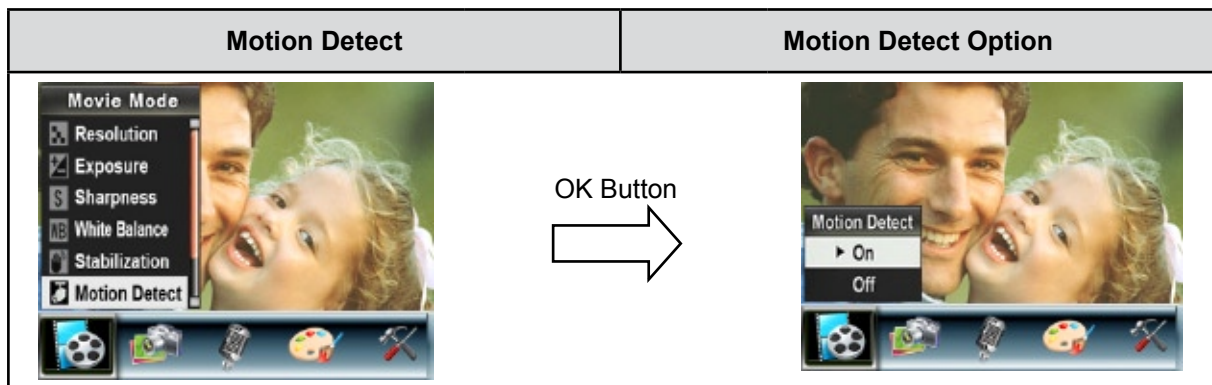
Motion Detect	Motion Detect Option
	OK Button →

Night Mode

Use Night Mode for night scenes or low light conditions. A longer exposure captures more detail of background subjects.

| Display Screen	Night Mode Option
	OK Button →

Note

To avoid blurry pictures, place the camera on a flat, steady surface, or use a tripod.

Camera Mode Setting

Picture Resolution

To change Picture Resolution:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.

2. Use Right/Left Buttons to select Camera Mode. Submenu of Camera Mode will pop out on the screen.

3. Use Up/Down Buttons to select Resolution then press OK Button to switch to Resolution submenu.

4. Use Up/Down Buttons to move between three settings.

5. Press OK Button to validate the setting and exit.
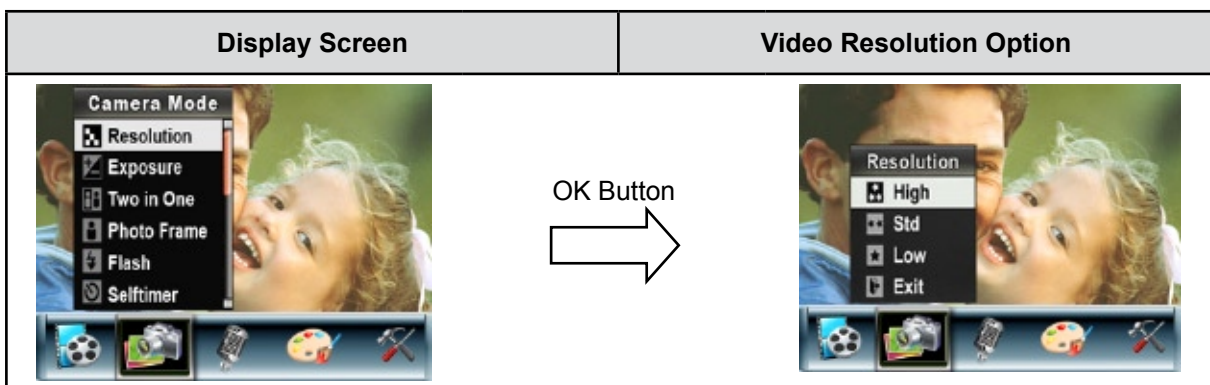
| Display Screen	Video Resolution Option
OK Button	

Exposure

The camera adjusts image exposure automatically. In certain circumstances you may wish to adjust the exposure compensation setting.

To change Exposure setting:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.
2. Use Right/Left Buttons to select Camera Mode. Submenu of Camera Mode will pop out on the screen.
3. Use Up/Down Buttons to move to Exposure Option. Press the OK Button and then Exposure Submenu will pop out on the screen.
4. Use Up/Down Buttons to choose preferred EV value. The change can be previewed immediately.
5. Press OK Button to validate the setting and exit.

Display Screen	Exposure Option
	OK Button
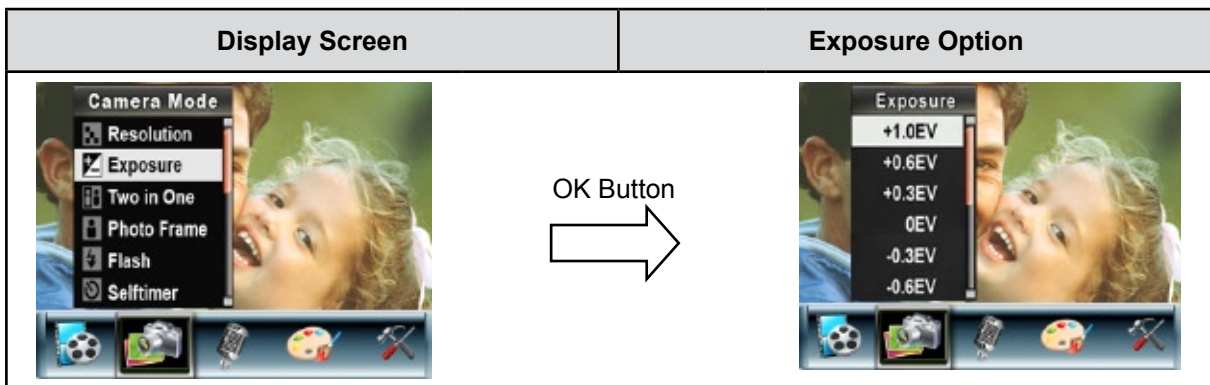
Two in One (Picture Record Mode Only)

With camera set to Two in One mode, you can combine two snapshots into one picture.

To enable Two in One:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.
2. Use Right/Left Buttons to select Camera Mode. Submenu of Camera Mode will pop out on the screen.
3. Use Up/Down Buttons to select Two in One then press OK Button to switch to Two in One submenu.
4. Use Up/Down Buttons to choose ON or OFF.
5. Press OK Button to validate the setting and exit.

| Display Screen	Two in One Option
OK Button	
1. Press Picture Shutter Button to take first picture.	
2. Press Picture Shutter Button to take second picture.	
3. Press the RECORD/PLAY Button to view the Two in One picture.	

Photo Frame (Picture Record Mode Only)

Your camera features popular electronic photo frame. You can take your picture with preferred electronic photo frame.

To enable Photo Frame:

1. When in Camera Mode, use Up/Down Buttons to select Photo Frame option, then press OK Button to switch to Photo Frame submenu.
2. Use Up/Down Buttons to locate preferred photo frame. Then select Set option and press OK Button to validate the setting and exit.

Display Screen	Photo Frame Option
OK Button	
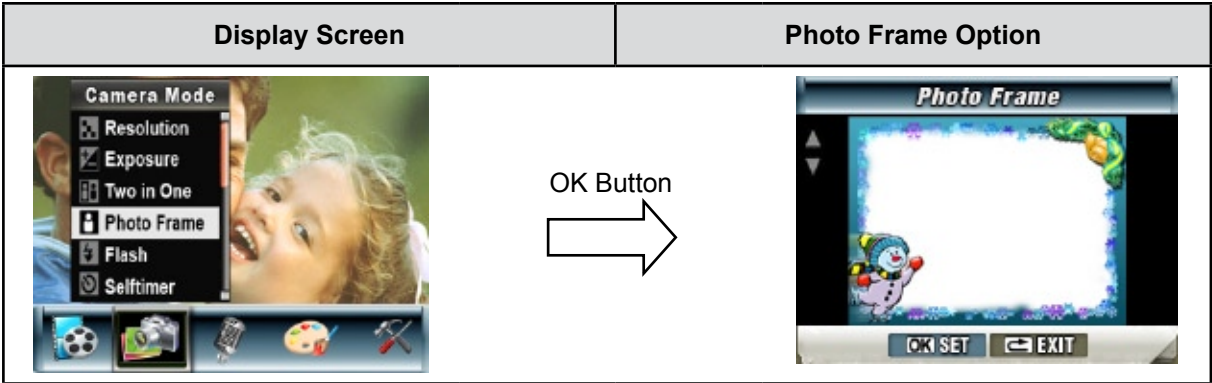
Flash (Picture Record Mode Only)

This camera has 2 flash settings. To change flash setting by either hot key (Right Button) or Option Setting.

- **Auto-flash (A⚡):** the flash fires automatically according to light conditions. Use this mode for general photography.
- **Flash Off (⊘):** the flash will not fire under any circumstances. Use this mode when taking images in a place where flash photography is prohibited, or when the subject is distant (beyond the range of the flash).
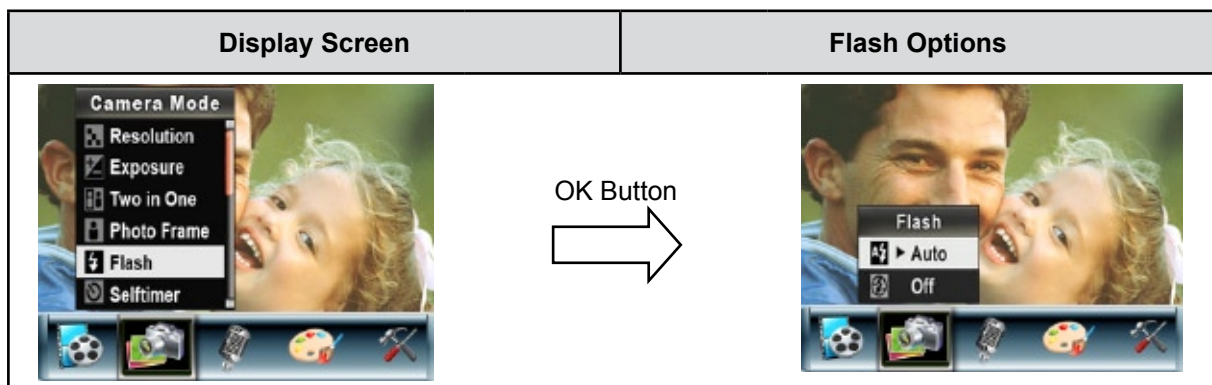
To change Flash setting:

1. When in Camera Mode, use Up/Down Buttons to select Flash Option, then press OK Button to switch to Flash submenu.
2. Use Up/Down Buttons to move between 2 settings.
3. Press OK Button to validate the setting and exit.

Note

The flash will be disabled automatically when battery power is low ( ).

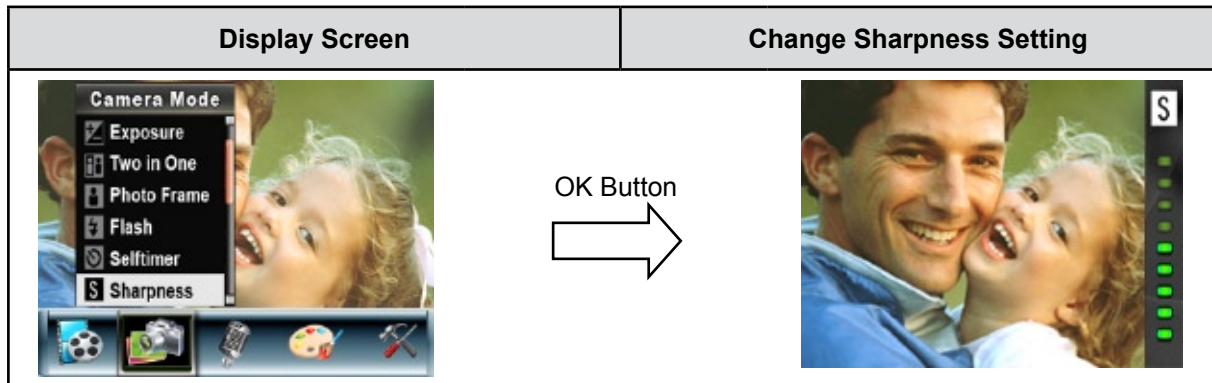| Display Screen	Flash Options
	OK Button →

Self-timer (Picture Record Mode Only)

The self-timer allows you to take pictures with a ten-second time delay. The self-timer LED on the front of the camera beneath the flash light will also blink. The speed of blinking will increase just before the picture is taken.

To enable Self-timer:

1. When in Camera Mode, use Up/Down Buttons to select Self-timer, then press OK Button to switch to Self-timer submenu.
2. Use Up/Down Buttons to choose On or Off.
3. Press OK Button to validate the setting and exit.

Display Screen	Self-timer Options
OK Button	
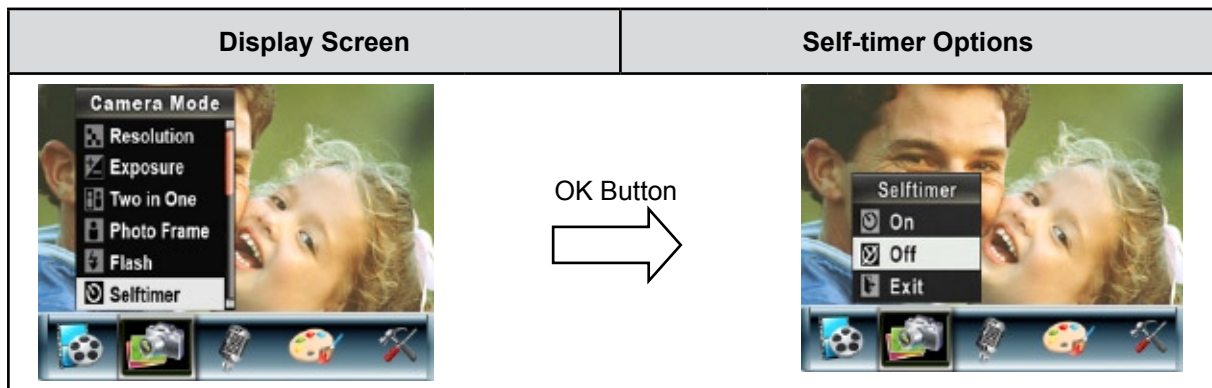
Sharpness

You can soften and sharpen images to achieve different effects.

To change Sharpness setting:

1. When in Camera Mode, use Up/Down Buttons to select Sharpness Option, then press OK Button to switch to Sharpness submenu.

2. Use Up/Down Buttons to move between nine levels. The change can be previewed immediately.

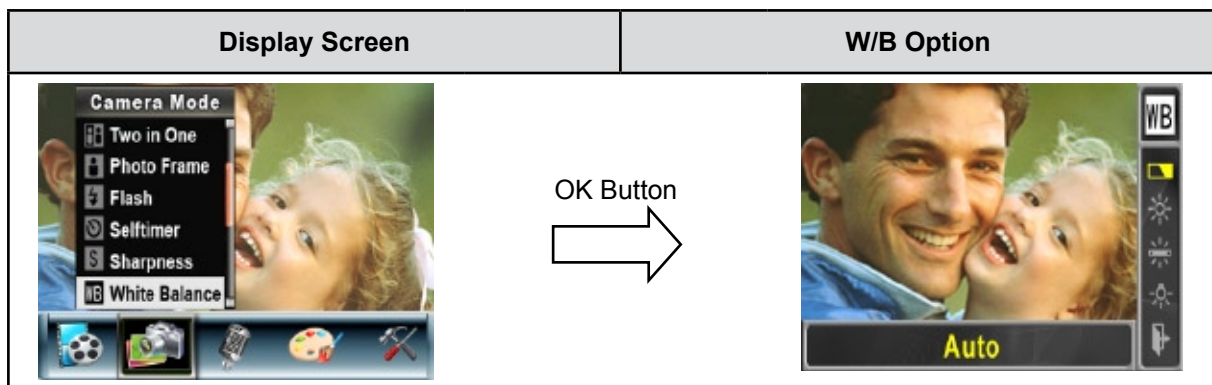3. Press OK Button to validate the setting and exit.

Display Screen	Change Sharpness Setting
OK Button ⇨	

White Balance

The camera adjusts the color balance of images automatically. Three manual white balance settings are available:

- **Auto (Default):** The camera automatically adjusts white balance.
- **Daylight:** Outdoors.
- **Fluorescent:** Under fluorescent light condition.
- **Tungsten:** Under tungsten light condition.

To change White Balance Setting:

1. In Movie/Picture Record Mode, press Ok Button to switch to record menu screen.
2. Use Right/Left Buttons to select Camera Mode. Submenu of Camera Mode will pop out on the screen.
3. Use Up/Down Buttons to select White Balance, then press OK Button to switch to White Balance submenu.
4. Use Up/Down Buttons to move between four settings. The change can be previewed immediately.
5. Press OK Button to validate the setting and exit.

Display Screen	W/B Option
OK Button	

Multi-Snap (Picture Record Mode Only)

With the camera set to Multi-Snap Mode, you can take five continuous pictures.

To enable Multi-Snap:

1. When in Camera Mode, use Up/Down Buttons to select Multi-Snap, then press OK Button to switch to Multi-Snap submenu.

2. Use Up/Down Buttons to choose On or Off.

3. Press OK Button to validate the setting and exit.

Display Screen	Multi-Snap Option
OK Button	
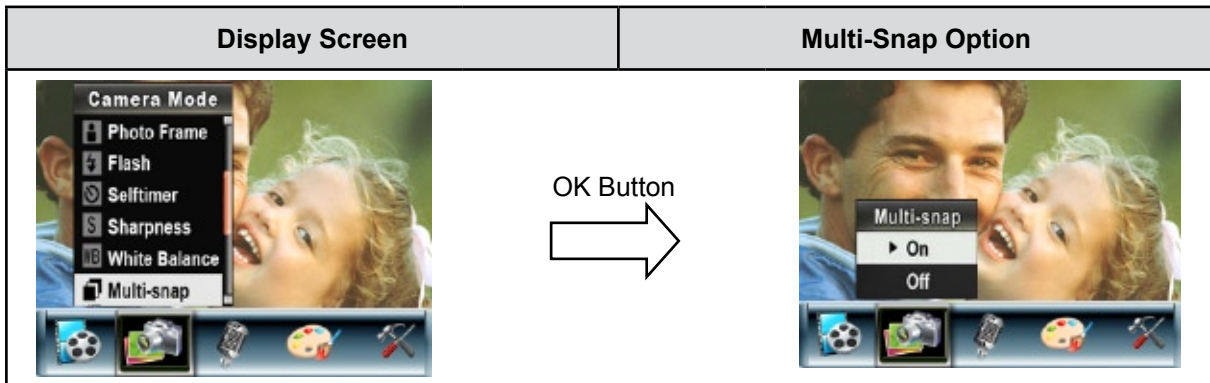
Backlight (Picture Record Mode Only)

With the camera set to backlight Mode, you can take shots when bright light is behind the subject.

To enable Backlight:

1. When in Camera Mode, use Up/Down Buttons to select Backlight, then press OK Buttons to switch to Backlight submenu.

2. Use Up/Down Buttons to choose On or Off.

3. Press OK Button to validate the setting and exit.

Display Screen	Backlight Option
OK Button	
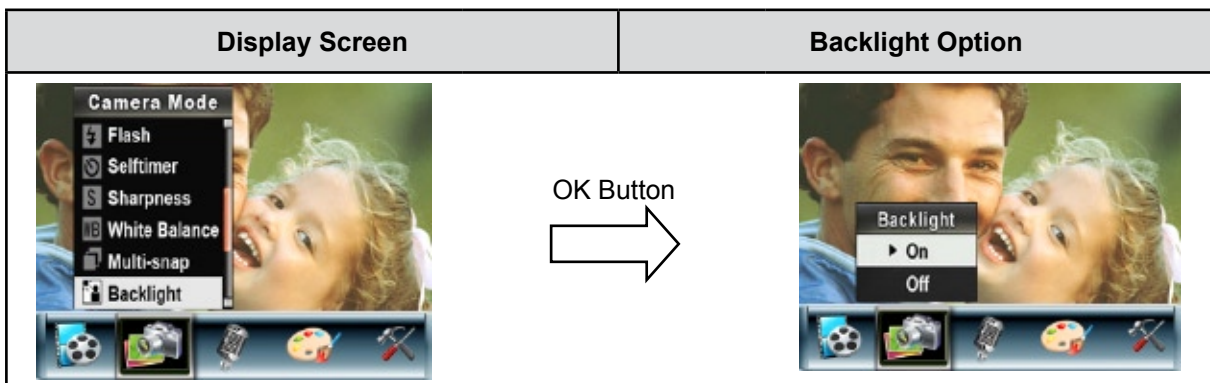
Date Printing (Picture Record Mode Only)

To enable Date Printing:

1. When in Camera Mode, use Up/Down Buttons to select Date Printing, then press OK Button to switch to Date Printing submenu.

2. Use Up/Down Buttons to choose On or Off.

3. Press OK Button to validate the setting and exit.

Display Screen	Date Printing Option
OK Button	
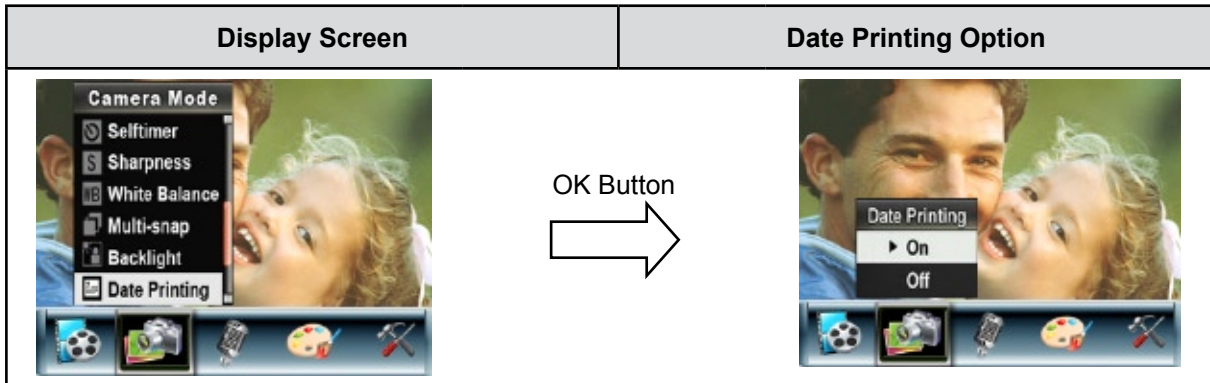
Note

Date would be shown on the printed picture once date printing is enabled.

Night Mode

Use Night Mode for night scenes or low light conditions. A longer exposure captures more detail of background subjects.

Display Screen	Night Mode Option
OK Button	
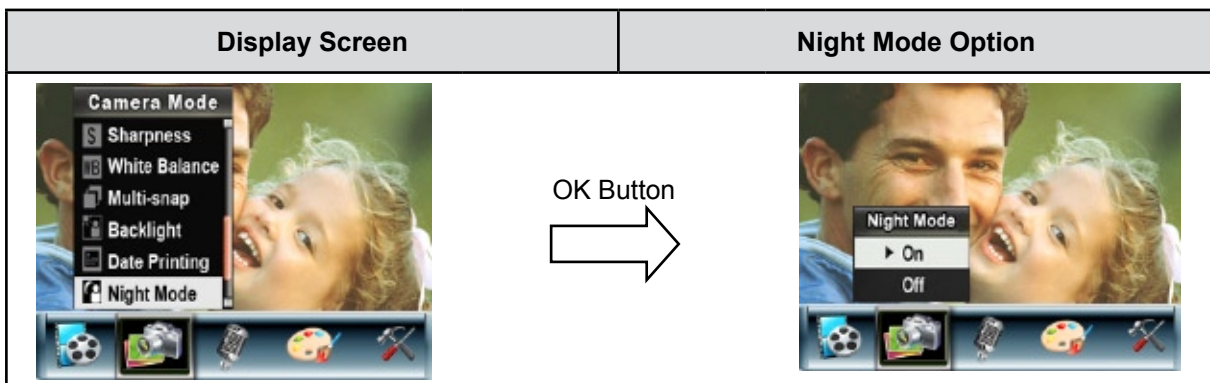
Note

To avoid blurry pictures, place the camera on a flat, steady surface, or use a tripod.

Voice Mode

To enable voice recording:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.

2. Use Right/Left Buttons to move to Voice Option. Then Voice Submenu will pop out on the screen.

3. Choose Enter option to enable voice recording and press OK Button to enter Voice Record Mode.

4. Press Movie Shutter Button ( ) to record voice and press it again to stop.

Display Screen	Voice Mode Option
OK Button	
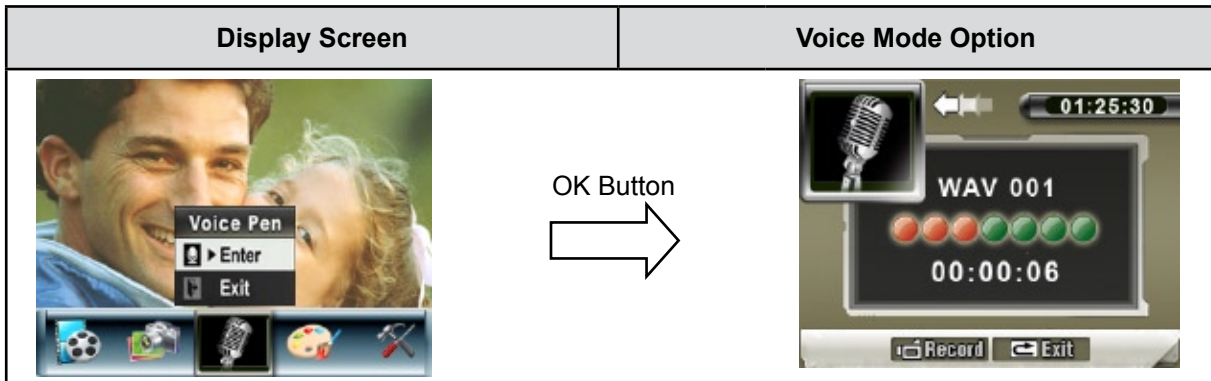
Effect Setting

There are four modes which are Normal, Black/White, Classic and Negative.

To change Effect setting:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.

2. Use Right/Left Buttons to move to Effect Option. Then Effect Submenu will pop out on the screen.

3. Use Up/Down Buttons to move between four settings. The change can be previewed immediately.

4. Press OK Button to validate the setting and exit.

Display Screen

Setting Menu

The Setting submenu contains options for configuring your camera set up.

To change advanced setting:

1. In Movie/Picture Record Mode, press OK Button to switch to record menu screen.

2. Use Right/Left Buttons to move to Setting option, then Setting Submenu will pop out on the screen.

3. Use Up/Down Buttons to move between settings.

Display Screen	Setting Option
	• Sound (operation sound) • Time Setting • Format Card • TV System • Language • Default Setting

Sound Setting

Enable or disable KeyPad tone and operation sound by using Up/Down Buttons , the press OK Button to validate the setting.

Submenu	Display Screen	Sound Setting
Sound		

Time Setting

- Move between Date, Time, Set and Exit by using Left/Right Buttons.
- Adjust date and time by using Up/Down Buttons, then select Set to validate each change.
- Select Exit to leave Time Setting without any change.

Submenu	Display Screen	Time Setting
Time Setting		

Format Card

Submenu	Display Screen	Format Card Options
Format Card		

Yes: Format the SD Card / built-in memory.

No (Default): Do not format SD Card / built in memory.

Note

All the data will be erased if the SD card is formatted. Make sure all the data are duplicated to PC before formatting SD card.

TV System

Ensure that the appropriate TV standard of your area is selected – either NTSC or PAL.

Wrong TV system setting may cause image flicker.

NTSC standard: USA, Canada, Japan, South Korea and Taiwan etc.

PAL standard: UK, Europe, China, Australia, Singapore and Hong Kong etc.

Submenu	Display Screen	TV System Option
TV System		

Selecting Interface Language

Submenu	Display Screen
Language	

Default Setting

To restore the default factory setting, select this option.

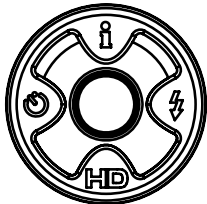| Submenu	Display Screen	Default Setting Option
Default Setting		

Section 4
Playback Mode

Press RECORD/PLAY Button to switch from Record Mode to Playback Mode.

Use Playback mode to play / view recorded or stored video clips and movies, review still images, listen to stored MP3 songs, or previously recorded audio voice.

Operation	Display Screen
Press RECORD/PLAY Button ( ) to switch from Record Mode to Playback Mode Main Menu. • There are 4 options in the Playback Mode, movie, picture, voice and music. • Direction Buttons can be used to select the specific option. • Press OK Button to view movies/pictures, listen to voice or music.	MOVIE

Button Function

The Direction Buttons have the following functions in Movie and Picture Playback Modes.

	Right Button: Go to the next movie/picture. **Left Button:** Go to the previous movie/picture. **OK Button:** Enter to movie, picture, voice or music option menu.
	Tele Button (Up Button): Digital Zoom in. **Wide Button (Down Button):** Digital Zoom out.
	RECORD/PLAY Button functions: 1. Switch between Record and Playback modes. 2. Return to the previous page.
	Movie Shutter Button: Start playing the recorded movie or voice.

LCD Monitor Information

Indicators on the LCD screen while in Playback Mode:

		Movie resolution Indicator	
(1)	〖HD〗	HD Resolution	
	〖D1〗	D1 Resolution	
	〖VGA〗	VGA	
	〖QVGA〗	QVGA	
		Picture Resolution Indicator	
	📷	High Resolution	
	📷	Standard Resolution	
	📷	Low Resolution	
(2)	🔒	Indicate the selected movie/picture is locked.	
	↺1	Indicate the single movie/voice/MP3 is being repeated.	
	↺A	Indicate all of the movies/voices/MP3 are being repeated.	
	🖼	Indicate the slide show is playing.	
(3)		Current Number/ Total number of movie, picture, voice, or MP3.	
(4)	▢	Magnification Indicator.	

Movie Playback

Operation	Display Screen
1. Use Direction Buttons to select the Movie option. 2. Press OK Button to go to Movie Playback Mode.	
3. Use Right/Left Buttons to go to the next or last movie. 4. Press Movie Shutter Button to play and press it again to pause. 5. While playing movie, press Right/Left Buttons to fast forward/backward, then release the button to stop. 6. Use Up/Down Buttons to adjust volume.	
7. Press OK Button to go to the movie option menu. 8. Use Right/Left Buttons to select six options, Delete, Thumbnail, Lock, Repeat One, Repeat All, or Exit.	

Delete Movies

Operation	Display Screen
1. Use Right/Left Buttons to select the Delete option ( ).	
2. Press OK Button to go to the Delete menu. 3. Use Right/Left Buttons to select the movie. 4. Use Up Button to delete all movies and Down Button to delete single movie. 5. Before a movie is deleted, a confirmation screen will appear; choosing "Yes" will execute the operation and "No" to cancel the operation. 6. Press OK Button to exit.	

Note

- *If a memory card is fitted, you can delete only those movies stored on the card.*
- *Movies on a written-protected memory card cannot be deleted.*
- *The delete function will only erase unlocked movies. Locked movies must be unlocked before being deleted.*

Thumbnail Function

Operation	Display Screen
1. Use Right/Left Buttons to select the Thumbnail option ( ).	
2. Press OK Button to view nine thumbnail movies. 3. To play a movie, use Direction Buttons to select the movie and press OK Button to view.	

Lock Movies

Single or all movies can be locked. This function can prevent the movies from being deleted accidentally.

Operation	Display Screen
1. Use Right/Left Buttons to select the Lock option ( ). 2. Press OK Button to go to the Lock menu.	
3. Use Right/Left Buttons to select the movie. 4. Use Up Button to lock/unlock all movies and Down Button to lock/unlock single movie. 5. Before a movie is locked/unlocked, a confirmation screen will appear; choosing "Yes" will execute the operation, "No" will cancel the operation. 6. Press OK Button to exit.	

Repeat Movies

This function automatically repeats playing single movie or all movies in order.

Operation	Display Screen
1. Use Right/Left Buttons to select the Repeat One option (↺) or Repeat All option (↺). 2. Press OK Button to start repeating.	

Picture Playback

Operation	Display Screen
1. Use Right/Left Buttons to select the Picture option. 2. Press OK Button to go to Picture Playback Mode.	
3. Use Right/Left Buttons to go to the next or last picture. 4. While the picture is selected, use Up/Down Buttons to magnify. 5. To navigate the magnified picture, press OK Button to enter navigation mode. Use Direction Buttons to navigate the magnified picture. Press OK Button again to exit navigation mode.	
6. Press OK Button to go to the picture option menu. 7. Use Right/Left Buttons to select five options, Delete, Thumbnail, Lock, Slideshow, or Exit.	

Delete Picture

Operation	Display Screen
1. Use Right/Left Buttons to select the Delete option ( ).	
2. Press OK Button to go to the Delete menu. 3. Use Right/Left Buttons to select the picture. 4. Use Up Button to delete all pictures and Down Button to delete single picture. 5. Before a picture is deleted, a confirmation screen will appear; choosing "Yes" will execute the operation, "No" will cancel the operation. 6. Press OK Button to exit.	

🔆 *Note*

- *If a memory card is fitted, you can delete only those pictures stored on the card.*
- *Pictures on a written-protected memory card cannot be deleted.*
- *The delete function will only erase unlocked pictures. Locked pictures must be unlocked before being deleted.*

Thumbnail Function

Operation	Display Screen
1. Use Direction Buttons to select the Thumbnail option ( ).	
2. While selecting Thumbnail option, press OK Button to view nine thumbnail pictures. 3. To view a picture, use Direction Buttons to select the picture. 4. Press OK Button to view the selected picture.	

Lock Pictures

Single or all pictures can be locked. This function can prevent the pictures from being deleted accidentally.

Operation	Display Screen
1. Use Right/Left Buttons to select the Lock option ( ).	
2. Press OK Button to go to the Lock menu. 3. Use Right/Left Buttons to select the picture. 4. Use Up Button to lock/unlock all pictures and Down Button to lock/unlock single picture. 5. Before a picture is locked/unlocked, a confirmation screen will appear; choosing "Yes" will execute the operation, "No" will cancel the operation. 6. Press OK Button to exit.	

View Slide Show

This function automatically repeats all pictures in order.

Operation	Display Screen
1. Use Right/Left Buttons to select the Slide option ( ). 2. Press OK Button to start the slide show; press it again to stop.	

Voice Playback

Direction Buttons Function

In Voice Playback Mode, the Direction Buttons have the following functions:

	Right/Left Buttons: Select the last or next voice. **Up/Down Buttons:** Adjust the voice playback volume. **OK Button:** Switch to voice option menu.

Operation	Display Screen
1. Use Right/Left Buttons to select the Voice option. 2. Press OK Button to go to Voice Playback Mode.	
3. Use Right/Left Buttons to go to the next or last voice recording. 4. Press Movie Shutter Button ( ) to start playing back the selected voice. Press it again to stop. 5. Use Up/Down Buttons to adjust the volume. 6. Press OK Button to go to the voice playback option menu.	
7. Use Up Button to select Delete option and Down Button to select Repeat option.	

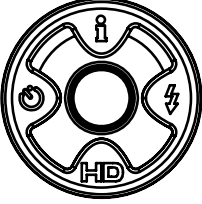|	
8. Press Down Button once to repeat single voice; Press twice to repeat all voice recording. 9. Press it again to disable the repeat function. 10. The repeat icons will be different while selecting Repeat One option and Repeat All option.	 05/45 WAV 036 02:11:26 ▲ Delete ▼ Repeat OK Return 05/45 WAV 036 02:11:26 ▲ Delete ▼ Repeat OK Return
11. To delete a voice, use Right/Left Buttons to select the voice. 12. Press OK Button to go to the voice playback option menu. 13. Press Up Button to select Delete option. 14. Use Up Button to delete all voice recordings and Down Button to delete single voice recording. 15. Before a voice is deleted, a confirmation screen will appear; choosing "Yes" will execute the operation, "No" will cancel the operation. 16. Press OK Button to exit.	 05/45 WAV 036 02:11:26 Stop OK Menu ◄ ► ▲ ALL ▼ ONE OK Return

Section 5
Listening to MP3 Music

MP3 Music

MP3 is a compressed audio file format. The MP3 music can be downloaded from some MP3 web sites.

Transfer MP3 Music to the camera

1. Install the camera driver on your computer.

2. Connect your camera to the computer USB port.

3. The Red LED will light when the camera is connected to the computer and in Mass Storage Mode.

4. Transfer MP3 music to My Computer\Removable Disk\MP3.

5. Once all the music is transferred, disconnect the USB cable from the PC.

Listen to MP3 Music

Operation	Display Screen
1. In Playback Mode, use Right/Left Buttons to select the Music option	
2. Use Up/Down Buttons to locate MP3 you want to play, or press Right/Left Buttons to jump to the next/previous page.	
3. Press Movie Shutter or OK Button to play MP3. 4. Press Movie Shutter Button again to stop playing. 5. Press Up/Down Buttons to adjust volume.	
6. Press OK Button to go to repeat menu. 7. Press Down Button once to repeat current MP3 (⟲). 8. Press Down Button twice to repeat all MP3 (⟲). 9. Press OK Button to exit.	

Listen to MP3 Music with earphone

MP3 stored in the camera can be played either by built-in speaker, or Earphone, or TV.

When the earphone cable is plugged in the camera, the option menu of Earphone/TV pops out on the LCD Screen. Choose earphone or TV and press OK Button to validate the setting.
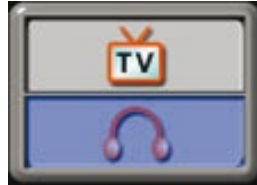
Section 6
Viewing Movie on PC

View Movie on PC

When playing a movie for the first time, Video Codec should be installed in PC. To do this:

1. Insert the CD-ROM into the computer's CD-ROM drive. Click "Install Device Driver" and follow the on-screen instructions to complete the installation.

2. Start video player such as Widows Media Player to view AVI Movies.

Share Movie

You can share the recorded movies to your friends via internet or CD. Make sure Video Codec is installed in your friends' PC. Video Codec is available in the provided CD.

Section 7
Viewing Pictures and Movies on a TV

Connecting to a high-definition TV

1. Connect HDMI cable to a HD TV.

2. Set video input source of a TV to " HDMI" option.

3. The steps for viewing stored pictures and movie on a TV are exactly the same as for viewing them on the LCD monitor.
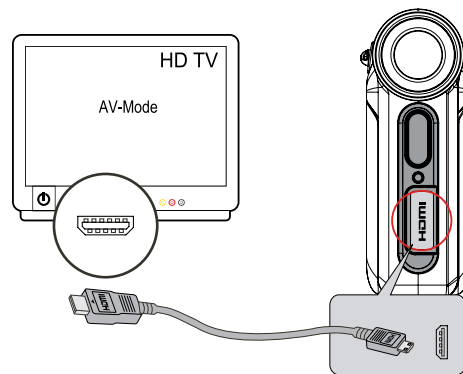
Connecting to a non-high-definition 16:9 (Wide) or 4:3 TV

1. Connect one end of the AV cable to your camera's AV Out port.
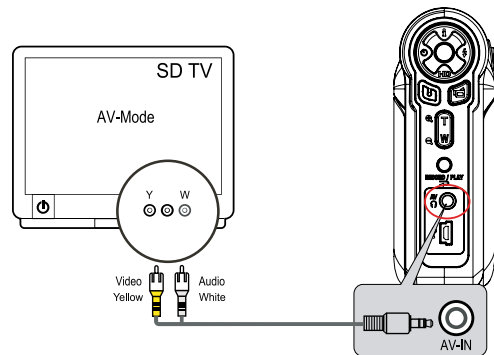
2. Connect the other end of the cable to a television.
3. The option menu of Earphone/TV pops out on the LCD Screen.

4. Choose TV option and press OK Button to validate the setting.
5. The steps for viewing stored pictures and movie on a TV are exactly the same as for viewing them on the LCD monitor.

Note

The LCD Panel does not work when the camera is connected to a television.

Section 8
Video File Converter

Bundled software CD contains Arcsoft Media Converter that features video file converter to convert multiple video formats into compatible format with your camera. In this way, you can convert various video files formats and playback your favorite movies on your camera.

8.1 Media Converter

To convert a video file:

1. Install Arcsoft Media Converter (Refer to section 11).

2. Click Start → Select Programs → Arcsoft Media Converter → Media Converter.

3. Media Converter main Screen will appear on your desktop.

4. Click "Add File".
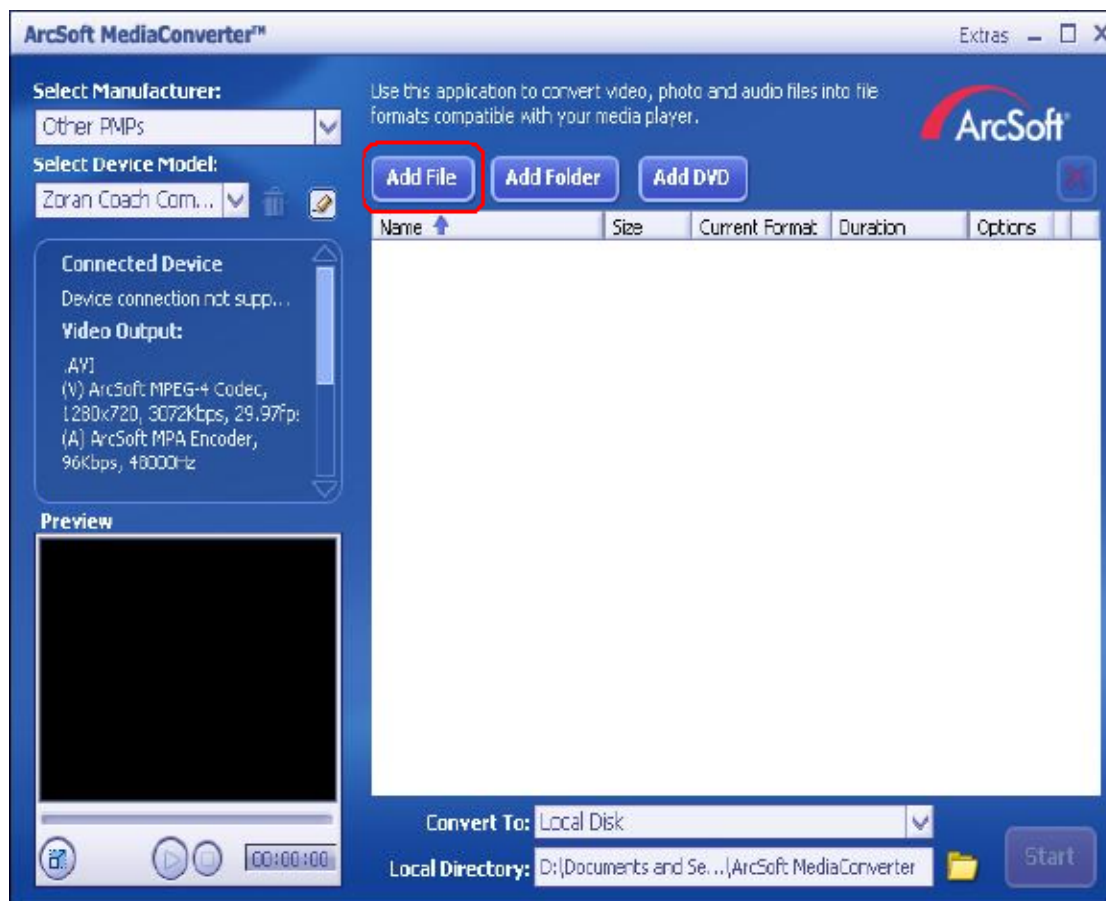
5. Select Video file you want to convert.
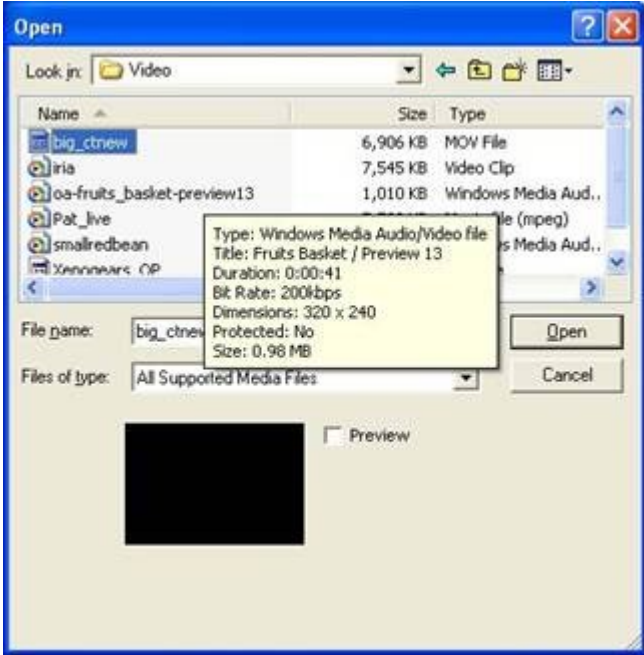
6. You can preview your media files before converting. To preview media files, use the following control functions.

- Click [image] to start previewing.

- Click [image] to stop previewing.

Make sure your media files can be previewed before converting.
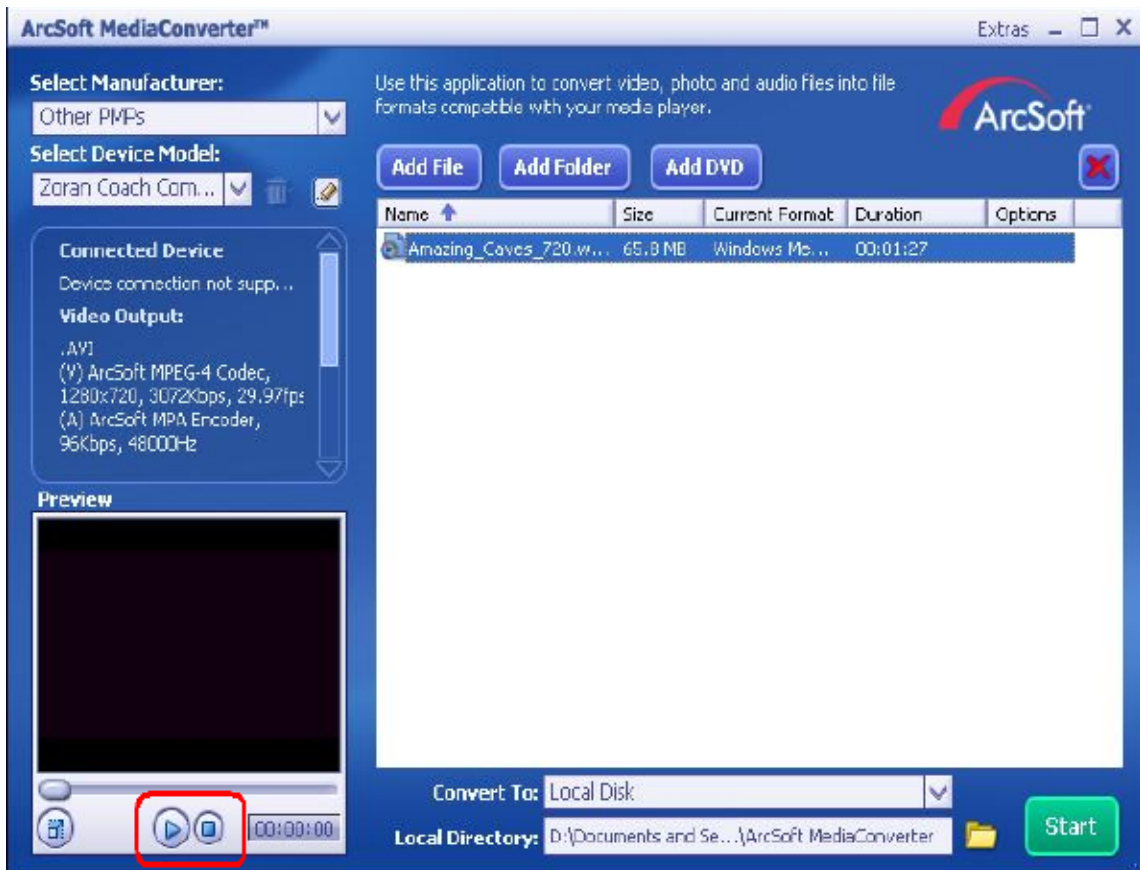
7. Click on"Start" to begin converting files
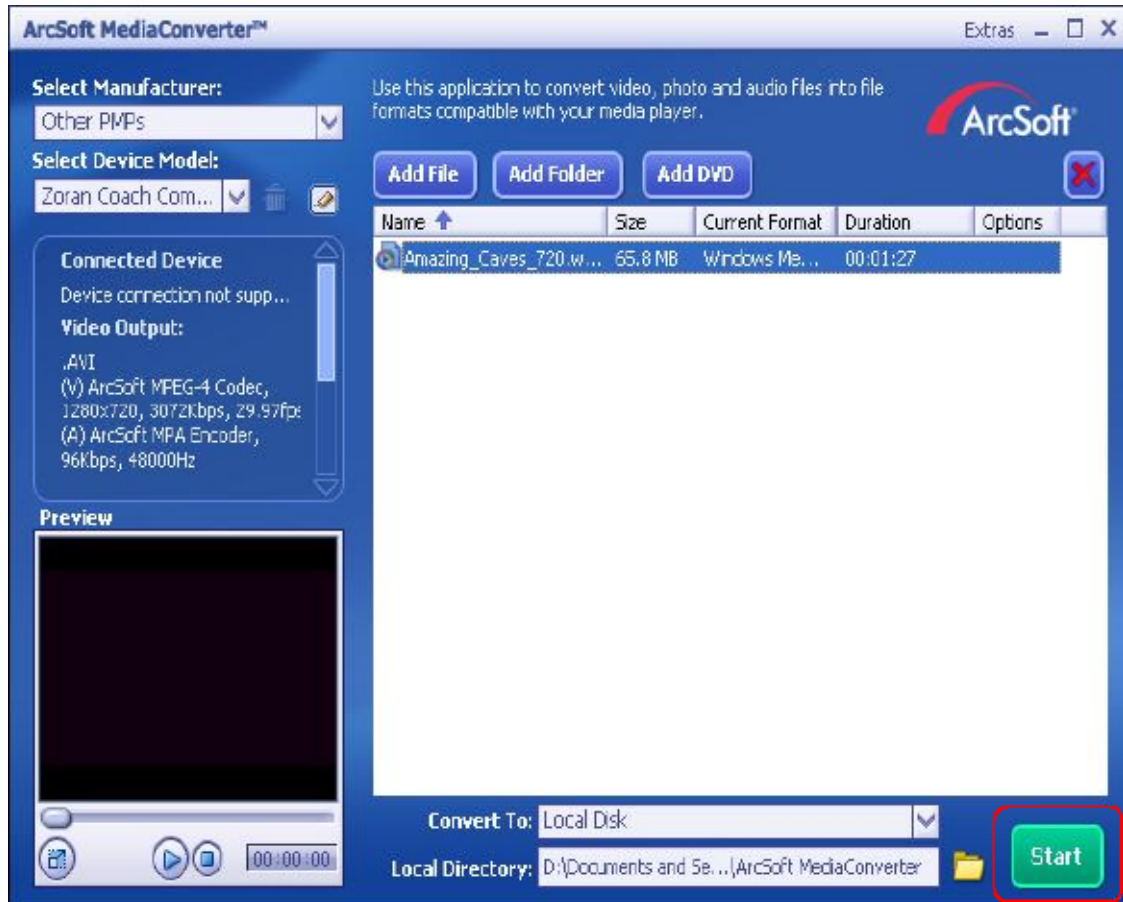
8. Task Report window will pop out after the task is completed.

9. Before transferring the converted file to your camera, rename the converted file to " Clip0001.avi". (Please note: if Clip0001.avi exists in the camera, then the converted file has to be renamed to clip0002.avi)

10.Connect your camera to PC and transfer the converted video to "My Computer\Removable Disk\ DCIM\200Movie" in your camera. (Refer to Section 10 Transferring Data to a Computer.)

11.After transferring the converted video to the camera, press RECORD/Play button and select PLAYBACK mode to enjoy your favorite movie.

Section 9
Burning the Recorded Clip into DVD

Bundled software CD contains Arcsoft MediaImpression also feathers burning the movie clip into DVD. You can preserve your precious movies on DVD to share with family and friends.

To create a DVD:

1. Install Arcsoft MediaImpression (Refer to Section 11)

2. Click [Start] →[Select Programs] →[Arcsoft MediaImpression]

3. Arcsoft MediaImpression main Screen will appear on your desktop.

4. Click [Make Movie] .
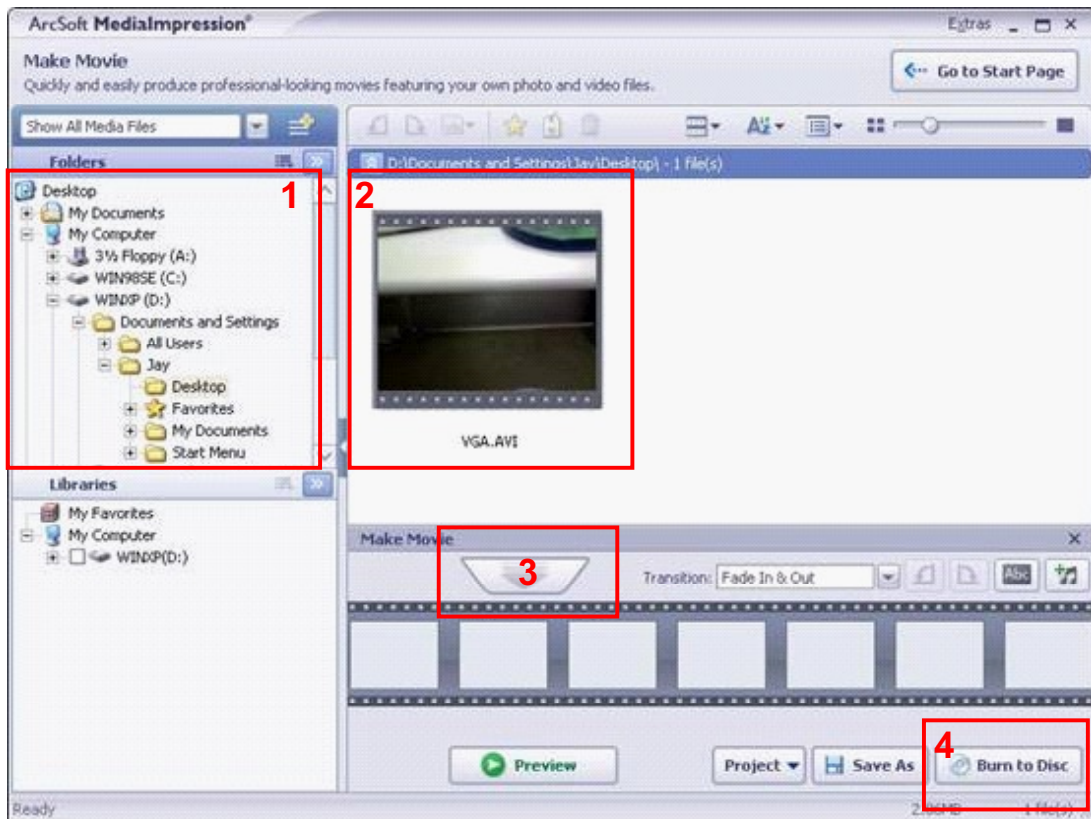
5. Click [Start] to start DVD burning.
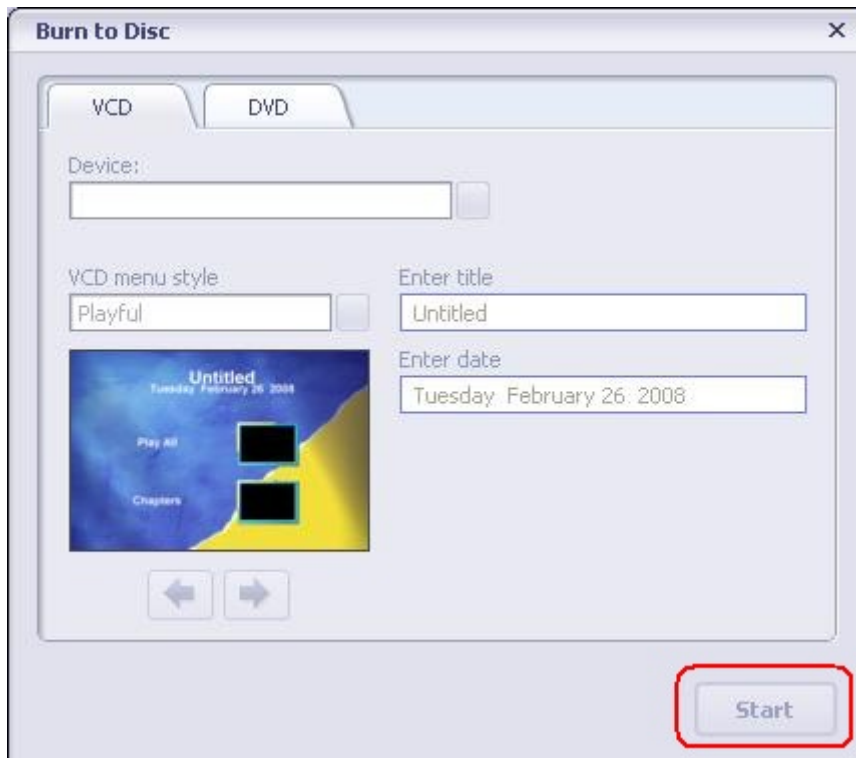
Section 10
Uploading Video Files to YouTube

The bundled software CD contains ArcSoft MediaImpression which features uploading the recorded videos to YouTube. It will help you can share them with your family and friends on YouTube website.

To upload video files to YouTube:

1. Install Arcsoft MediaImpression (Refer to Section 11)

2. Click [Start] → [Select Programs] →[Arcsoft MediaImpression]

3. Arcsoft MediaImpression main Screen will appear on your desktop.

4. Click [Video] Option.

5. Select the video file you want to upload and click [Upload to YouTube] option at the bottom menu.
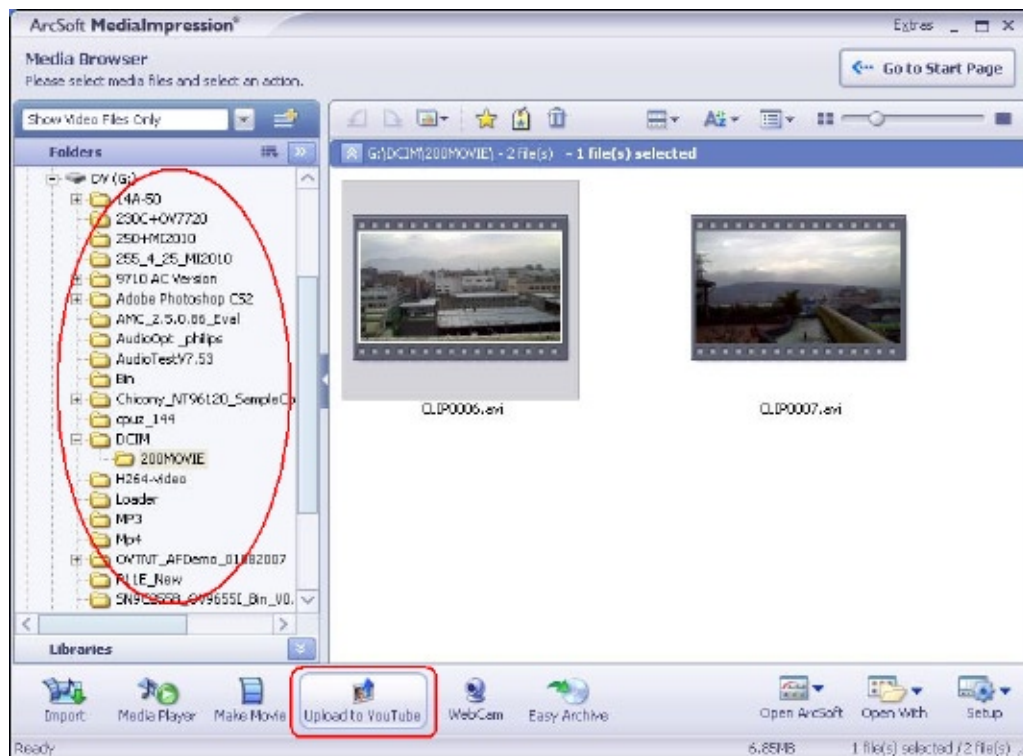
6. If this is your first using this function, please follow the instruction on YouTube Setting Panel.
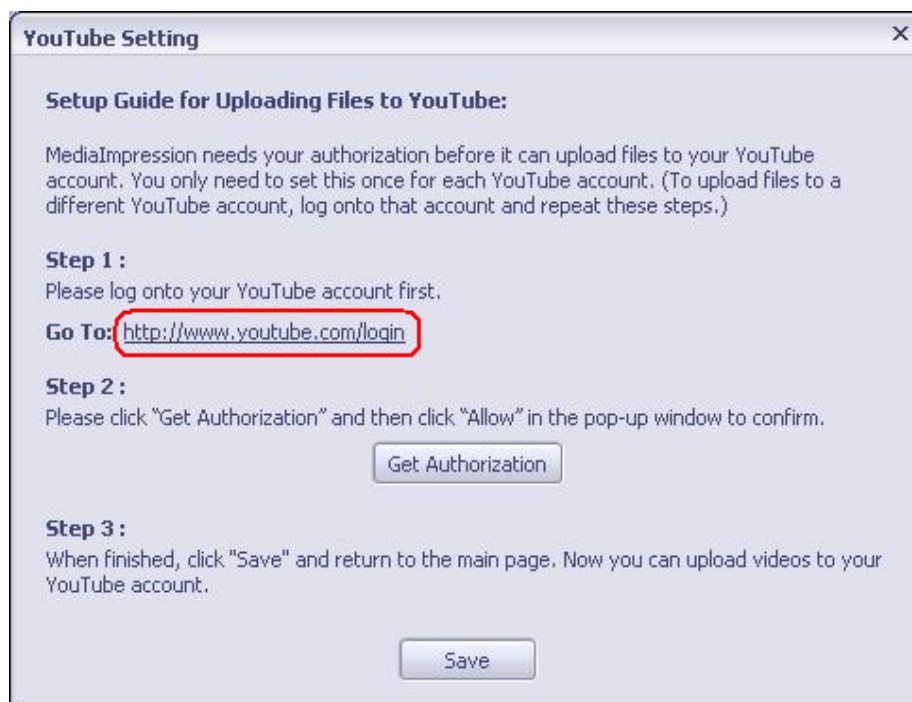
7. Go to http://www.youtube.com/login, then Log onto your YouTube account.

(If you do not have YouTube account, sign up here first.)

8. After you log onto your YouTube account, Click [Get Authorization] button below.
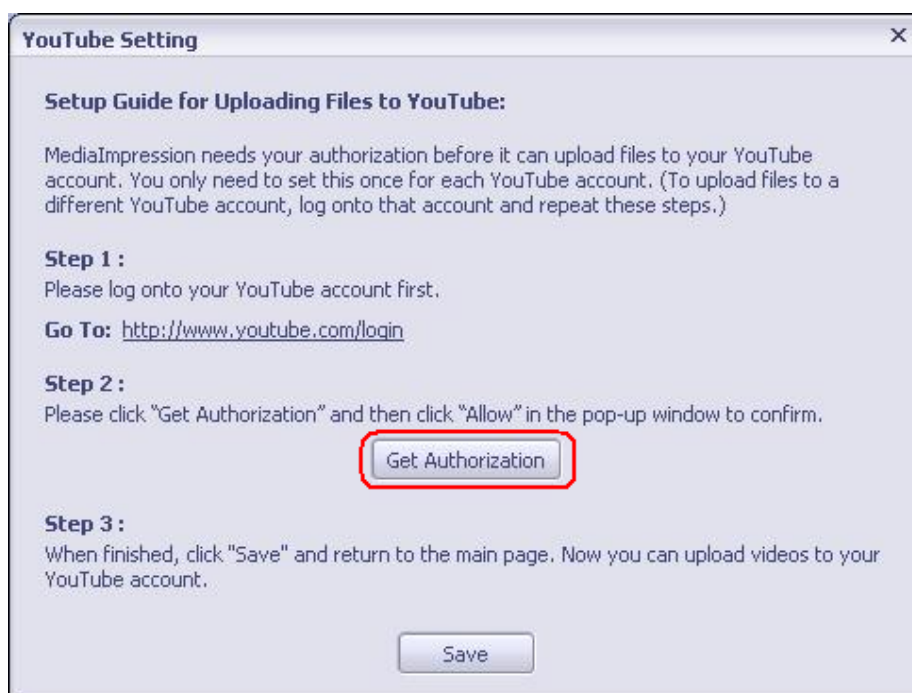
Then, Click [Allow] Button shown on YouTube website.
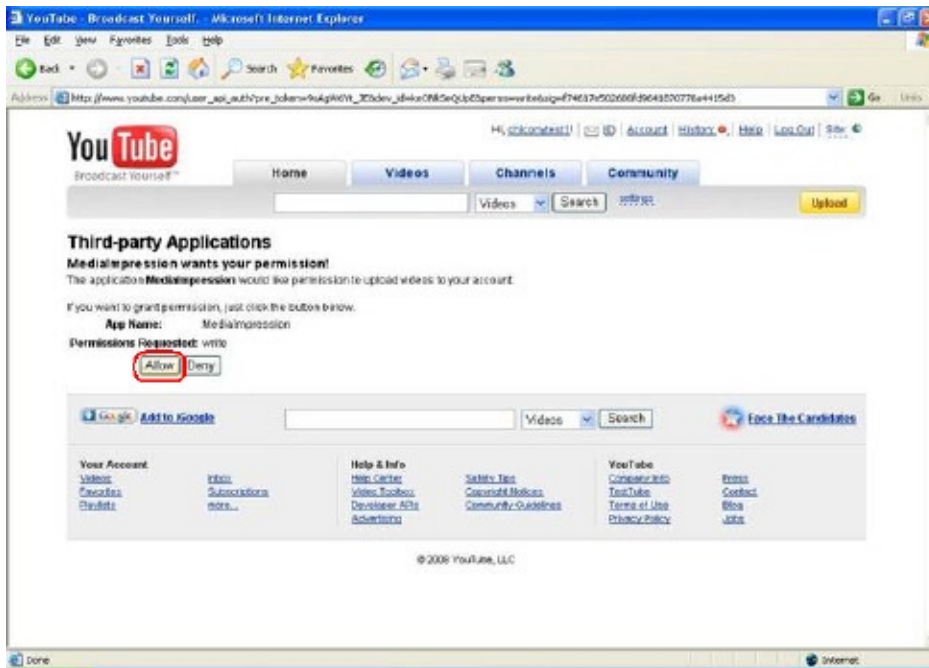
9. Click [Save] Button to upload the video.
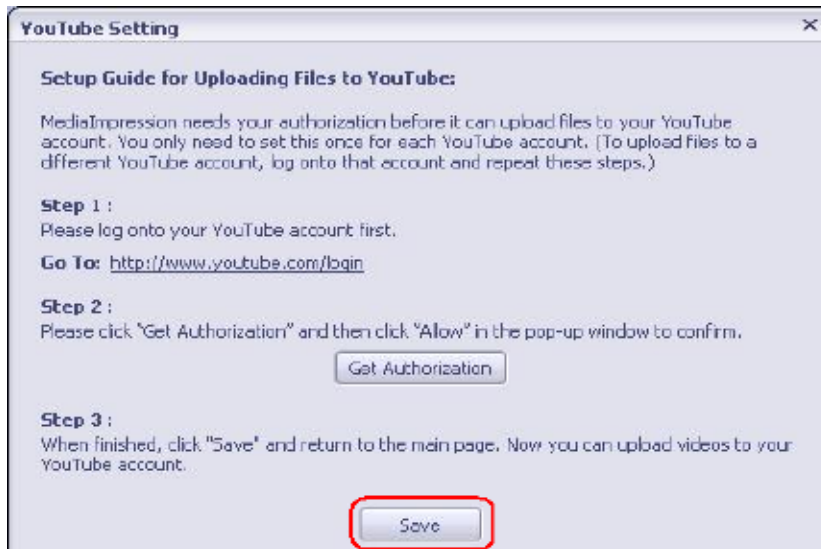
Section 11
Transferring Data to a Computer

Installing the Digital Camcorder Driver

Before connecting this camcorder to a computer for the first time, you should install a driver on the computer. The driver is on the CD-ROM disc provided in the package. To install the driver:

1. Insert the CD-ROM into the computer's CD-ROM drive. The autorun screen will appear.
2. Click "Install Device Driver". Follow the on-screen instructions to complete the installation. Depending on your operating system, you may have to restart your computer after installing the driver.

Connecting Your Camcorder to a Computer

You can transfer pictures, movies or voice recordings stored on your camcorder to a computer and send them in emails to friends or post them on websites. To do this you should:

1. Install the camcorder driver on your computer.
2. Connect the computer and camcorder with the supplied mini USB 2.0 cable.
3. Default mode is Mass Storage Mode when the camcorder connects to PC.
4. Transfer pictures or movies or MP3 or voice recordings.

Mass Storage Device Mode

The RED LED will light up when the camcorder is connected to the computer. Movies, pictures and voice recordings can be found on your computer at "My Computer\Removable Disk\DCIM\". Under this mode, you can read, delete, move, or copy any movie/picture/voice recording you want. Use the bundled Arcsoft application software to edit the movies or pictures.

PC Camcorder Mode

When in Mass Storage Device Mode, press RECORD/PLAY Button to switch to PC Camcorder Mode and the GREEN LED will light up. Under this mode, you can implement live video conference meetings or use video email over the Internet.

Installing Bundled Software

The CD-ROM supplied with this camcorder contains 4 pieces of software.

• **Arcsoft Media Impression** is a user-friendly application that helps you manages your media for you, and gives you funny and exciting ways to create and share projects featuring your photo, video, and music files. Support the feature of uploading videos easily to YouTube.

• **Arcsoft Media Converter** can convert multiple video formats into compatible format with your camcorder.

• **Adobe Reader** is a popular program that you need to have installed to read the User's Manual. Many computer users will find this software already installed on their computer.

• **Device Driver includes**

• **1. Video Codec for viewing movies correctly on PC**

• **2.Webcam Driver**

The detail information can be found in online help of all the bundled software.

To install the bundled software:

1. Insert the CD-ROM into your computer's CD-ROM drive. The autorun screen appears.

2. Select the piece(s) of software you want to install from the list, then click **Install Application Software**. Follow the on-screen instructions to complete the installation.

Section 12
Specifications and System Requirements

Specification

Image Sensor	5 Mega Pixel Sensor
Operation Modes	Movie Record, Picture Record, Voice Record, MP3 Player, PC Camera, Mass Storage Device
Lens	F3.0 (f = 7.0mm)
Focus Range	200cm~infinite (Normal Mode) 90cm ~ 200cm (Portrait Mode) Center: 20 cm (Macro Mode)
Digital Zoom	8X
Shutter	Electronic
LCD monitor	2.4" LCD
Storage Media	Built-in Memory (partial memory is used for Firmware code); SD/MMC Card Slot support
Image Resolution	Still image 3744x2808 (11M Pixels) 2592x1944 (5M Pixels) 1600x1200 (2M Pixels)
Movie Resolution	HD 1280 x 720 pixels 30 fps D1 720 x 480 pixels 30 fps VGA 640 x 480 pixels 30 fps QVGA 320 x 240 pixels 30 fps
White Balance	Auto/Manual (Daylight, Fluorescent, Tungsten)
Exposure	Auto/Manual
Self-Timer	10 second delay
Flash	Auto/Off
File Format	Picture: JPEG Movie: AVI (H.264) Voice: WAV Music: MP3
Image play	Single Image/Thumbnails/Slideshow
PC Interface	Mini USB 2.0 Port
TV out	NTSC/PAL Selectable
Battery	Lithium-ion Rechargeable Battery
Dimension	95(H) * 71(W) * 34(D) mm
Weight	140g (without battery)

System Requirement

Windows 2000/XP/Vista

Pentium III 800 MHz above

256 MB RAM

CD ROM

1GB free HDD space

Available USB port

16-bit Color Display

FAQ and FCC statement

Simple Troubleshooting

1 If the LCD image is not clear when shooting, how can the focus be adjusted?

Rotate the "Focus Ring" on the circumference of the lens to the proper position: Normal ▲ / Portrain 🯄 /Macro❦ .

2 How to shoot correctly?

First properly adjust the focus, then after pressing the shutter button, the LCD shows a "funnel" marking in the center of the screen to record the image.

Firmly hold your camera until the "funnel" marking disappears, then you can get a clear picture.

3 The flash is not working.

When the camera is in Macro mode or if the battery power is low, the flash does not work.

4 When recording, the zoom does not function and the "Zoom In/Out" button is inactive.

If the "stabilization" function is activated when recording, the "Zoom In/Out" button for digital zooming will be disabled.

5 The files on the memory card do not display smoothly when the LCD shows the "!" or "funnel" marking.

The "!" means the file format is not supported and the "funnel" marking indicates the file is not read smoothly. Delete these files and the others can then be played normally.

It is recommended that you first format the memory card before using it and avoid placing files with different formats in the same folder.

FCC statement

FCC part 15.21

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC part 15.105

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio TV technician for help.

- Pertinent testing documentation is available for verification.